

SCIENCE, TECHNOLOGY & TELECOMMUNICATION COMMITTEE

PRESENTATION ON CENTERS

FOR

TECHNICAL EXCELLENCE

Daniel H. López
President

New Mexico Tech
August 8, 2014

Mr. Chairman and Members of the Committee

I. Introduction

Today, I want to support and elaborate briefly on Mr. Mondragon's comments regarding the potential stimulus and value of these economic Centers of Technical Excellence. Such centers are not "pie-in-the-sky" schemes but they have a proven track record of added value and employment opportunities for New Mexico, not to mention the value of the innovations which have been derived from them. These innovations, in many cases, have led to solutions of many pressing and critical problems facing our state. The solutions derived from these innovations range from developing counter terrorism measures to complex cyber security solutions for protecting the state and private data systems in New Mexico, as well as selling those services in seven other states. Clearly, then, an investment by New Mexico in Centers for Technical Excellence have a number of direct benefits to the state, including jobs, product development, creating innovative solutions, and add tax revenues for the General Fund.

II. A Model Program

- Center for Explosive Technology
Established in 1984
\$5.0 Million Appropriation
Dr. Per-Anders Persson, Director
- The Center, in 1992, was merged with the name Terminal Effects, Research & Analysis Unit
- Renamed EMRTC in order to broaden the program
- Today a program that started with \$5.0 million grew to almost \$60.0 million before the Great Recession
- Declined during the recession but beginning to grow again
- Approximately \$40.0 million this year, expected to reach \$45.0 million by next year
- Goal is to grow it to \$100.0 million in the next 5 to 10 years

III. Business Units

- Training Delivery and Development
- Energetic Materials (Engineering Science)
- Cyber Security
- Playas

IV. Major Programs

FY 14 Major Programs Completed

- US Department of State – Curtain Wall Test - \$2.5 million
- US DHS/FEMA – First Responder Program - \$22 million
- Sandia National Laboratory
 - Sprint Rocket Motor - \$400K
 - Water Impact Testing - \$425K
 - Other - \$440K
- Aerojet
 - Warhead R&D - \$260K
 - Production QC - \$250K

FY 15 Projection – Major Programs

- Department of State - \$15million
 - Building Response to Large Vehicle Improvised Explosive Devices (LVIED)
 - Glass Curtain Wall Response to LVIED
 - Building Response to Debris from LVIED
 - Testing and Validation of the Glass Curtain Design, Construction, and Type of Glass Curtain Wall for the New Embassy in London, UK
- Sandia National Laboratory - \$10million
 - Product Improvement and Dynamic Testing for Quality and Design Assurance for National Weapon Stockpile
 - Davis Gun; 16-inch, 8-inch, 155mm, and 40mm
- DHS/FEMA - \$22million
 - First Responder Awareness and Training Program
- Multiple Customers - \$2million
 - Home Made Explosives (HME) Awareness and Effects Training

Academic Outreach

- Initiated Robust Cross Campus Consulting by Adding Joint Research Capabilities to Academic Departments at NMT
 - To date, Mechanical Engineering, Chemistry, Electrical Engineering, and Physics are Participating by allowing joint faculty/EMRTC appointments

V. Economic Impact

Energetic Materials Research and Testing Center (EMRTC)

EMRTC provides New Mexico jobs

Employs a workforce of 200 full time jobs
Employs an additional 100 contractor jobs
Total New Mexico jobs provided: 300 jobs

EMRTC spends \$9,000,000 per year for purchases of materials and services in New Mexico

EMRTC generates approximately \$2,800,000 state income tax revenue

EMRTC generates approximately \$600,000 gross receipts tax revenue for New Mexico

Examples of income sources: Department of Homeland Security, Aerojet Corp., Alliant Tech Corp., Department of Defense and Department of State

Of the 33 counties in New Mexico, 15 (or 45%) receive funding from purchases and/or services from funds generated by EMRTC

EMRTC employees live and spend their income in 5 NM counties

EMRTC funds scholarships, senior design projects and student activities

Employs about 5% of student population

Contract backlog: \$140,000,000

Public Service

Emergency preparedness support to municipalities, city and county governments and school districts (e.g. Hidalgo County)

Border Security training for local, county, and state law enforcement

Support the university in its public outreach (e.g. demonstrations, hosting prospective student groups, multimedia enactments)

Hidalgo County Support

Active shooter in schools (also law enforcement) training

Emergency Management Planning

Compliance with Federal and State regulations (environmental, water quality, waste water, etc.)

Grant writing assistance

Border Security Training

Focus on NM border
Drug Cartel interdiction
Road stops
Tactical first aid

Economic Impact from First Responder Program

Calendar Year 2013

Number of Students Trained in Residential Course (Socorro): 5,205
Number of rental car days purchased: 22,155 (\$931,201.00)
Number of hotel nights purchased: 22,155 (\$1,837,534.00)
Number of airline tickets purchased: 5,000 (\$3,019,547.00)
Number of meals purchased: 61,260 (\$1,077,435.00)

Calendar Year 2014

Number of Students trained in Residential Course (Socorro): 1,185
Number of rental car days purchased: 5,116 (\$187,042.00)
Number of hotel nights purchased: 5,116 (\$326,814.00)
Number of airline tickets purchased: 1,110 (\$686,363.00)
Number of meals purchased: 14,178 (\$245,295.00)

Two Programs are being considered for funding in the FY 15 appropriations

Joint National Training Center (JNTC) Program Enhancement
Border Security Training and Exercise Program

If these two programs were funded in FY15 and EMRTC was successful in competing for 80% of the appropriated funds, then:

- 70 new EMRTC jobs would be created
- Approximately \$20,000,000 would be spent in New Mexico for materials and services

VI. Final Remarks

- Centers for Technical Excellence have proven records of success
- Centers provide a great learning laboratory for students. (Data show that students who are involved in research projects persist and graduate at a higher rate than students that don't participate in research.)
- Centers develop and apply solutions to real state and national problems
- Centers create jobs and have a significant impact on the state
- Centers generate significant gross receipts and state income tax for the General Fund

